

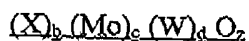
Serial No.: 09/869,985
Reply to Office Action of: June 10, 2003
Atty. Docket No.: GIH-0006

LISTING OF CLAIMS

The submitted listing of claims will replace all prior versions, and listings, of claims in the application. All claims are listed with the status in parentheses immediately following the claim number. Claims 1, 2, 3, 6, 10 and 11 are currently amended; claims 4 and 9 are cancelled.

1. (CURRENTLY AMENDED) A process for producing a hydrocrackate having a relatively low sulfur and nitrogen content, which process comprises:

61
reacting a feedstream in a single reaction stage, in the presence of a hydrogen treat gas, as it passes through two or more catalyst beds wherein the upstream most catalyst bed is comprised of a bulk multimetallic catalyst comprised of ~~at least one Group VIII non-noble metals and at least two Group VIB noble metals wherein the ratio of Group VIB metals to Group VIII non-noble metals is about 10:1 to about 1:10, of a~~ trimetallic catalyst represented by the formula:



wherein X is a Group VIII non-noble metal, the molar ratio of b:(c+d) is 0.5/1 to 3/1, and the downstream most is comprised of a hydrocracking catalyst, which single reaction stage is operated at a temperature of about 300 to 450°C, and hydrogen pressures from about 85 to 200 bar (1250-2915 psig), thereby resulting in a hydrocrackate being substantially lower in sulfur and nitrogen than the feedstock.

2. (CURRENTLY AMENDED) The process of claim 1 wherein Group VIII non-noble metal is selected from Ni and Co ~~and the Group VIB metals are selected from Mo and W.~~

3. (CURRENTLY AMENDED) The process of claim 1 wherein ~~two Group VIB metals are present as Mo and W and the ratio of Mo to W is about (9:1 to about 1:9.~~

4. (CURRENTLY CANCELLED)

Serial No.: 09/869,985
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5. (ORIGINAL) The process of claim 1 wherein the bulk multimetallic catalyst is amorphous and has a unique X-ray diffraction pattern showing crystalline peaks at $d = 2.53$ Angstroms and $d = 1.70$ Angstroms.

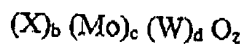
6. (CURRENTLY AMENDED) The process of claim 5 wherein the Group VIII non-noble metal is nickel.

B) 7. (ORIGINAL) The process of claim 1 wherein the feedstock is hydrotreated in a first reaction stage containing one or more reaction zones and the effluent is hydrocracked in a second reaction stage, also containing one or more reaction zones.

8. (ORIGINAL) The process of claim 1 wherein the effluent from the hydrotreating stage is passed to a separation zone wherein the resulting bottoms are fed to the hydrocracking stage.

9. (CURRENTLY CANCELLED)

10. (CURRENTLY AMENDED) The process of claim 1 wherein the bulk multimetallic is represented by the formula:



wherein ~~X is a Group VIII non-noble metal, and the~~ has a molar ratio of $b:(c+d)$ ~~is 0.5/1 to 3/1, preferably of~~ 0.75/1 to 1.5/1, more preferably 0.75/1 to 1.25/1.

11. (CURRENTLY AMENDED) The process of claim 3 wherein the molar ratio of $c:d$ is preferably $>0.01/1$, more preferably $>0.1/1$, still more preferably $1/10$ to $10/1$, still more preferably $1/3$ to $3/1$, most preferably substantially equimolar amounts of Mo and W, e.g., $2/3$ to $3/2$; and $z = [2b + 6(c+d)]/2$.

12. (ORIGINAL) The process of claim 1 wherein the bulk multimetallic catalyst is essentially an amorphous material having a unique X-ray diffraction pattern showing crystalline peaks at $d = 2.53$ Angstroms and $d = 1.70$ Angstroms.